Per- and Polyfluoroalkyl Substances (PFAS)

What are PFAS?

PFAS are not a single chemical, they are a broad family of manmade compounds with unique structures and properties. PFAS have been used in industry and consumer products since the 1940s. There are thousands of individual chemicals that can be classified as PFAS. Due to their chemical structure, PFAS do not break down easily over time thus they are sometimes referred to as "forever chemicals."

Where do they come from?

PFAS are used in a number of commercial industries and found in many consumer products, including firefighting foams, paint, clothing, cookware, food packaging, and personal care products. It is estimated that roughly 600 PFAS compounds have been synthesized for commercial use.

Since their introduction almost 60 years ago, PFAS can be found almost everywhere, in water, soil, air, many consumer products in your house, and even in humans and animals. Documented sources for human exposure to PFAS are seafood, drinking water, and dust.

What are the risks?

Though there is still a lot to be learned about PFAS and their effects on human health, preliminary studies have linked some PFAS compounds to adverse health effects. These include cancer, liver issues, increased cholesterol and increased risk during pregnancy. Most studies have been focused on researching the toxicity of just a few PFAS compounds, leaving many gaps in our current understanding of how PFAS can affect our health and environment.

How do I test for PFAS?

Testing for PFAS can be a costly endeavor. Unfortunately, there is currently no analytical method available to test for "ALL" PFAS compounds. To narrow down the list of PFAS compounds you want to test for, you can first look at current federal and state regulations. The EPA has approved two methods for testing PFAS in drinking water, EPA 537.1 and 533. Both methods test for PFAS compounds currently regulated by the EPAs National Primary Drinking Water Regulation. EPA 537.1 tests for a limited list of 18 PFAS compounds but may be the economical choice for curious domestic well users. EPA 533 covers a more extensive list of 25 PFAS compounds and comes with a larger price tag.

If you are interested in learning more about testing your water for PFAS you can all our office at 907-463-4415.

References

https://www.eurofins.com/en-us/environment-testing/resources/webinars/pfas-in-consumer-products-part-7/
https://www.eurofins.com/en-us/environment-testing/resources/webinars/pfas-basics-part-1/
https://www.epa.gov/sdwa/and-polyfluoroalkyl-substances-pfas
https://www.epa.gov/pfas